# Systems Thinking A methodology for understanding complex systems

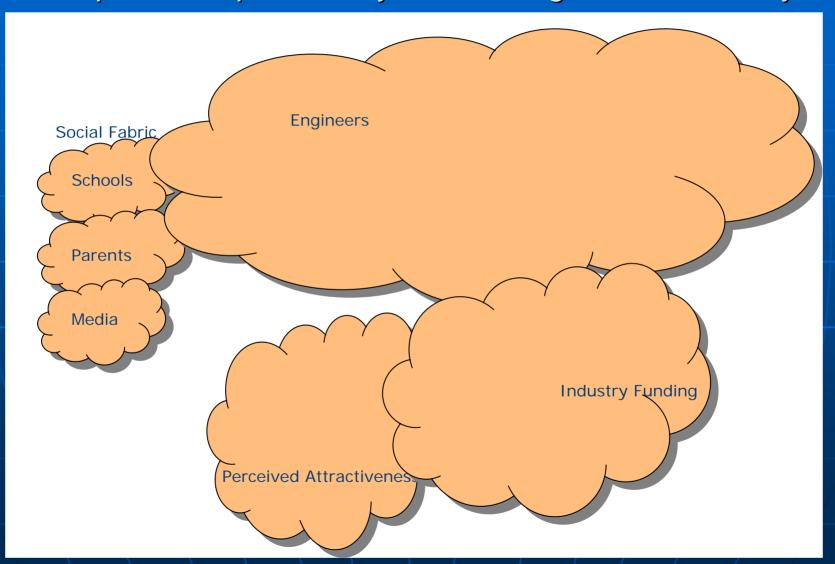
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#### Here's the challenge!

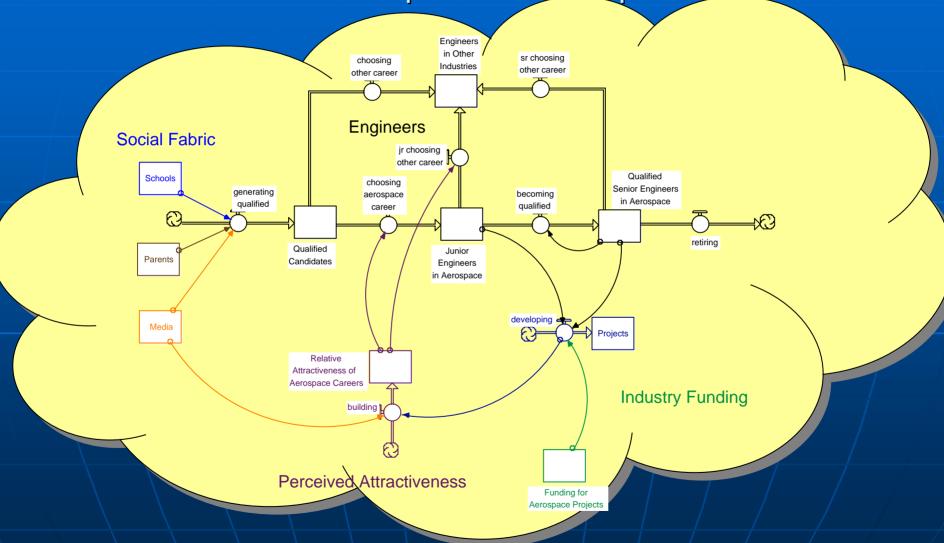
#### The problem spans many diverse segments of society



#### Addressing the Challenge

Pontifex

The stock & flow mapping language is an ideal way to map the complex relationships



This map can be translated into a computer simulation model for policy testing!.

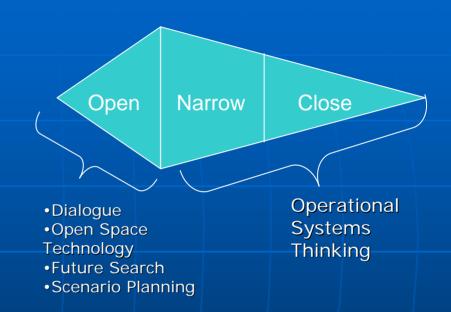
#### Addressing the Challenge



## Systems Thinking employs a process to develop a collective mental model that's useful!

To generate a collective mental model requires...

- Stakeholder Involvement
- A Divergent/Convergent Process
- A Common Language (Visual!)
- A process based on The Scientific Method
- An ability to rigorously test disagreements technology is invaluable!!!



#### Addressing the Challenge



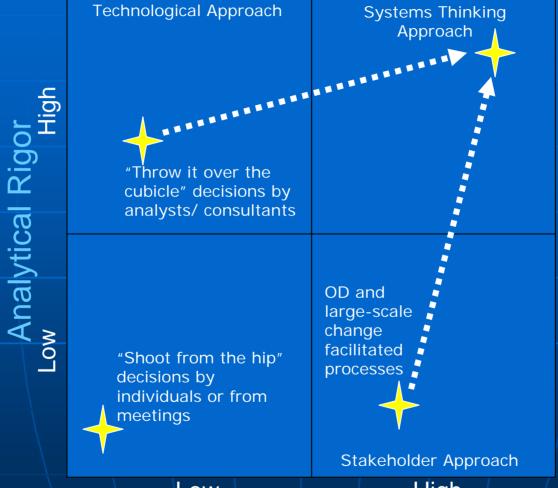
## Systems Thinking employs a process to develop a collective mental model that's useful!

To be a useful the mental model must capture the "essence" of reality including...

- Broad spatial & temporal boundaries
- Conditions & Actions (Stocks & Flows)
- Time delays
- Interdependencies within/across system "sectors"
- Feedback loops

### Addressing the Challenge Conclusion





Low High Stakeholder Support